

26. An apparatus for acquiring off-axis X-ray images of test objects

comprising:

an X-ray source for producing a steerable electron beam from a number of different positions along a horizontal path perpendicular to a vertical axis, each position being at an angle from the vertical axis; and

a high-resolution detector positioned to receive X-rays that are transmitted through at least two regions of interest of the test object from each of the positions and to produce electronic representations of acquired off-axis images corresponding to the regions of interest.

34. A method for acquiring a plurality of off-axis X-ray images comprising:

placing a test object with at least two regions of interest on an inspection plane;

producing a steerable X-ray beam from a number of different positions along a horizontal path perpendicular to a vertical axis;

directing an X-ray beam to a first region of interest;

receiving on a detector X-rays that are transmitted through the first region of interest;

directing an X-ray beam to a second region of interest;

receiving on the detector X-rays that are transmitted through the second region of interest; and

producing electronic representations of acquired off-axis images corresponding to the regions of interest.